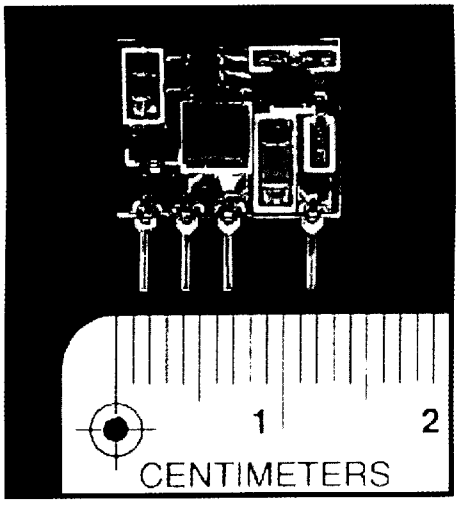

MiniPower 40

DC to DC Converter

Congratulations! You have purchased the finest miniature Switch-Mode power supply for your projects. Due to its high efficiency this converter operates over the full life of one or two alkaline cells. By design, the MiniPower regulator discharges a battery under **constant-power, which provides for the most efficient use of the battery's energy**. Unlike shunt regulators, the MiniPower series do not function by wasting precious energy as heat, and will continue to provide power until the batteries are completely exhausted. By contrast, a typical linear shunt regulator providing 5V from a 9V "transistor" battery will not fully discharge the battery before falling out of regulation, while "throwing away" 4V as heat in the process. The typical 9V battery costs about twice as much, and has a fraction of the capacity of two AA-size cells. Your new MiniPower converter has been engineered with the finest components available to provide trouble-free performance.

FEATURES

- 5V Output
- 75% Average Efficiency
  (1.2V to 3.1V input, Min to Max load)
- Low Switching Ripple (≤ 35mV Avg.)
- Shutdown Input
- Shielded Inductor for Low EMI
- Reversed-Battery Protection
- Over-Voltage Protection to ± 8V
- Ultra-Small SIP Package

PRELIMINARY

SPECIFICATIONS

(TA=+25 C)

PARAMETER	COND.	MIN	MAX
Input Voltage (1)			± 8V
Operating Voltage (2)		+ 1.2V	+ 5V
Output Voltage (Typical)	No Load 5V		± 5% (± 1%)
Max. Output Current	Vout = 5.0V –5%		
1.8 to 3.1V Input (2 Cells)		75mA	190mA
1.2 to 1.5V Input (1 Cell)		30mA	50mA
Output Ripple (3) (Typ. Average)	1.2V to 3.1V In		60mV (≤35mV)

1. Inputs greater than ± 8V ***will cause damage!***
2. Startup at 1.2V requires ***at least*** a 25mA load. (Startup at 1.4V with ***No Load***.)
3. Ripple increases with Vin and decreases with Increasing load.

CONFIGURATION

Tie SHUTDOWN pin to V out for normal operation !